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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,589	05/09/2006	Malcolm Colin Richards	1600-000005/US/NP	2717
28997 7590 08/13/2007 HARNESS, DICKEY, & PIERCE, P.L.C 7700 BONHOMME, STE 400 ST. LOUIS, MO 63105			EXAMINER WAKS, JOSEPH	
			ART UNIT 2834	PAPER NUMBER
			MAIL DATE 08/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/559,589		RICHARDS ET AL.	
	Examiner		Art Unit	
	Joseph Waks		2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/12/05; 7/2/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "comprising", "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: current generating means, a first rotary part.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

Art Unit: 2834

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 6-8, 11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Hings (US 2,542,522).

Hings discloses invention as claimed: current generating means 29 including first generator means (generator rotor, not shown) and second generator means (generator stator, not shown) arranged to generate electric current in response to relative rotation between the first and second generator means, a first rotary part having vanes 32, 33 arranged to rotate in a first direction around an axis when exposed to a flow of air perpendicular to the axis, the first rotary part operatively connected to the first of the generator means, first rotary part barrier means 16 arranged in stationary relation to the first rotary part configured to provide a barrier sector comprising a barrier around a portion of the vane free edge path of the first rotary part, the barrier extending between an air inlet region in which a portion of the vane front edge path is exposed to allow the underside of a vane to be exposed to a flow of air, and an air outlet region in which a portion of the vane front edge path is exposed to allow the underside of a vane to be exposed following rotation through said barrier sector to allow the discharging of air, the barrier means configured to inhibit air which follows a vane rotating into the barrier sector from discharging outside of the vane free edge path whilst the vane is rotating through the barrier sector, a flow control system 22, binding means 26.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, 9, 10, 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheridan et al. (GB 2341646) in view of Hings (US 2,542,522).

Sheridan et al. disclose current generating means 29 including first generator means 19 and second generator means 10 arranged to generate electric current in response to relative rotation between the first and second generator means, a first rotary part 20 having vanes 21 arranged to rotate in a first direction around an axis when exposed to a flow of air perpendicular to the axis, the first rotary part operatively connected to the first of the generator means, a second rotary part 10 having vanes 11 arranged to rotate in a second opposite direction around the axis when exposed to a flow of air perpendicular to the axis, the second rotary part operatively connected to the second generator means, a third rotary part 30 arranged to rotate in the same direction as, and operatively connected to the same generator means as, the first rotary part. However, Sheridan et al. do not disclose first, second and third rotary part barrier means arranged in stationary relation to the first, second and third rotary part configured to provide a barrier sector including a barrier around a portion of the vane free edge path of the first rotary part extending between an air inlet region in which a portion of the vane front edge path is exposed to allow the underside of a vane to be exposed to a flow of air, and an air

outlet region in which a portion of the vane front edge path is exposed to allow the underside of a vane to be exposed following rotation through said barrier sector to allow the discharging of air, the barrier means configured to inhibit air which follows a vane rotating into the barrier sector from discharging outside of the vane free edge path whilst the vane is rotating through the barrier sector.

Hings discloses rotary part barrier means 16 arranged in stationary relation to the first rotary part configured to provide a barrier sector comprising a barrier around a portion of the vane free edge path of the first rotary part, the barrier extending between an air inlet region in which a portion of the vane front edge path is exposed to allow the underside of a vane to be exposed to a flow of air, and an air outlet region in which a portion of the vane front edge path is exposed to allow the underside of a vane to be exposed following rotation through said barrier sector to allow the discharging of air, the barrier means configured to inhibit air which follows a vane rotating into the barrier sector from discharging outside of the vane free edge path whilst the vane is rotating through the barrier sector, for the purpose of directing and concentrating the wind upon the blades which are delivering power to the generator.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the generator as taught by Sheridan et al. and to provide the barrier as taught by Hings for the purpose of directing and concentrating the wind upon the blades which are delivering power to the generator.

Re claims 2 and 3, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the second rotary part barrier means

Art Unit: 2834

configured to provide a barrier sector comprising a barrier around a portion of the vane free edge path of the rotary part configured to inhibit air which follows a vane rotating into the barrier sector from discharging outside of the vane free edge path whilst said vane is rotating through said barrier sector for the purpose of directing and concentrating the wind upon the blades which are delivering power to the generator as taught by Hings, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sheridan et al. (GB 2341646) in view of Hings (US 2,542,522) as applied to claim 1 above and further in view of Gotmalm (WO 90/08881).

The combined generator discloses the invention essentially as claimed. However, it does not disclose the rotary parts are arranged to rotate around an axial shaft comprising sections each releasably engageable with at least one other section.

Gotmalm discloses wind turbine having rotary parts 3A and 3B arranged to rotate around an axial shaft comprising sections 2A and 2B each releasably engageable with at least one other section by coupling 6, that are self aligning and capable to be installed on non-rigid type support.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined generator and to provide the shaft with the releasably engageable sections as taught by Gotmalm for the purpose of installing in limited area on non-rigid support.

Art Unit: 2834

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sheridan et al. (GB 2341646) in view of Hings (US 2,542,522) as applied to claim 1 above and further in view of Appa (US 20030006614).

The combined generator discloses all elements essentially as claimed. However, it does not disclose the generator including a rotary part configured to allow air to flow through the rotary part in a direction along the axis during rotation.

Appa discloses a wind turbine generator furnished with a rotary part 89 configured to allow air to flow through the rotary part in a direction 38 along the axis during rotation for the purpose of cooling the generator 80.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined generator and to provide the rotary part configured to allow air to flow through the rotary part in a direction along the axis during rotation as taught by Appa, for the purpose of cooling the electric windings of the generator.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (571) 272-2037. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

Art Unit: 2834

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Joseph Waks
Primary Examiner
Art Unit 2834

8/7/07